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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,364	04/16/2004	Achim Breuer	32368-202726	8089

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EXAMINER

WELCH, GARY L

ART UNIT PAPER NUMBER

3765

DATE MAILED: 04/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/825,364

Applicant(s)

BREUER ET AL.

Examiner

Gary L. Welch

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>04162004, 10062004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 22 is objected to because of the following informalities: It appears that the following change is required:

Line 1: Delete "15"

Appropriate correction is required.

Claim Rejections - 35 USC § 102

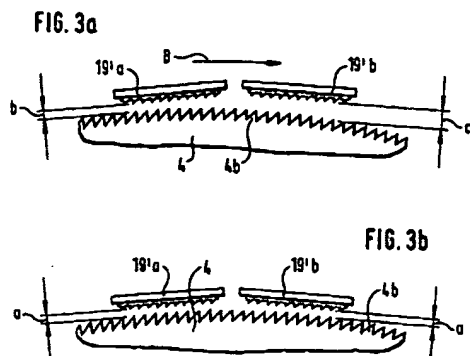
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8, 10-13, 15-20, 22, 24 and 26-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Pferdmenges et al. (U.S. 6,189,184).

Pferdmenges et al. discloses a carding machine CM having a roller 4 with a direction of rotation (4a) and a carding segment 17 opposing the roller 4. The carding segment 17 has a carrier 18 and first and second carding elements (19a, 19b) arranged one behind the other in the direction of rotation. The first carding element 19a has a first carding surface 19'a and the second carding element 19b has a second carding surface 19'b wherein at least one of the carding surfaces is inclined with respect to a tangent at the opposed roller surface (see figure below).



With regard to claim 2, the carding elements (19a, 19b) are arranged in a stationary manner.

With regard to claim 3, the roller 4 is a carding cylinder.

With regard to claims 4 and 5, the carding elements are non-movable and movable.

With regard to claim 6, the first and second carding elements (19a, 19b) are arranged to be individually movable in the carrier 18 via set screws (34₁, 34₂).

With regard to claim 7, the carding elements (19a, 19b) are each rotatable about an axis parallel to the roller 4.

With regard to claim 8, an adjusting device (34₁, 34₂) for rotation is provided.

With regard to claims 10 and 11, the first and second elements are each inclined relative to respective tangents at the opposed roller surface. The angle of inclination can be the same or different.

With regard to claims 12 and 13, the angle of inclination is acute and obtuse (see figure above).

With regard to claim 15, the angle of inclination for two carding elements (19a, 19b) can be changed simultaneously.

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With regard to claim 16, the angular change of each carding element (19a, 19b) is different.

With regard to claim 17, a central adjusting device (26a, 26b) is provided for changing the angles of all the carding elements.

With regard to claim 18, the angle of inclination is arranged to be changeable starting from a tangential position.

With regard to claim 19, the carding nip becomes smaller at the first carding element (19a) and larger at the second carding element (19b) (see figure above).

With regard to claim 20, the first and second elements (19a, 19b) form with the roller 4, first and second nips. The spacing at the narrowest locations of each of the first and second nips is the same.

With regard to claim 22, the position of the carding elements (19a, 19b) can be detected by eyesight.

With regard to claim 24, two carding segments 17 are provided.

With regard to claims 26-29, the invention is disclosed in one or more of the above rejections.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 9, 14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pferdmenges et al. (U.S. 6,189,184).

Pferdmenges et al. discloses the invention substantially as claimed above.

However, Pferdmenges et al. does not disclose that the carding element is arranged to be rotatable in the carrier with two degrees of freedom.

A review of the applicant's specification does not disclose the criticality of the claimed limitation. In fact, the only instance where the claimed limitation has antecedent with the specification is in the Summary of the Invention section.

Since the carding elements of Pferdmenges et al. are adjustable to close tolerances as needed during carding operations, it would have been obvious through routine experimentation to allow the carding element to be rotatable in the carrier with two degrees of freedom to provide a predetermined level of carding of the fibers.

With regard to claim 14, the angle of inclination can be changed in operation and out of operation.

With regard to claim 21, a review of the applicant's specification does not disclose the criticality of the claimed limitation. In fact, the only instance where the claimed limitation has antecedent with the specification is in the Summary of the Invention section.

Since the carding elements of Pferdmenges et al. are adjustable to close tolerances as needed during carding operations, it would have been obvious

through routine experimentation to allow the carding element to be adjusted centrally by 0.5 degrees to provide a predetermined level of carding of the fibers.

6. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pferdmenges et al. (U.S. 6,189,184) in view of Sutcliffe (U.S. 4,996,745).

Pferdmenges et al. discloses the invention substantially as claimed above.

However, Pferdmenges et al. does not disclose only stationary card top elements associated with the cylinder.

Sutcliffe teaches a carding machine having a carding cylinder 4 with only a plurality of stationary card top elements associated therewith. Stationary and rotating carding elements are functionally equivalent to each other in how the fibers are processed. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the rotating carding elements of Pferdmenges et al. with the all stationary carding elements as taught by Sutcliffe since the rotating and stationary carding elements are functional equivalents.

7. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pferdmenges et al. (U.S. 6,189,184) in view of Demuth et al. (U.S. 5,031,278).

Pferdmenges et al. discloses the invention substantially as claimed above.

However, Pferdmenges et al. does not disclose at least one carding segment in the preliminary carding zone, after carding zone and underneath carding zone.

Demuth et al. teaches a carding machine having a carding cylinder 2 with a plurality of carding segments disposed in the preliminary carding zone, after

carding zone and underneath carding zone (Figure 1). By providing a plurality of carding segments arranged around the periphery of the carding cylinder, improved carding and elimination of dirt is accomplished.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the carding machine of Pferdmenges et al. with carding elements in the underneath carding zone as taught by Demuth et al. in order to improve carding and elimination of dirt from the fibers.

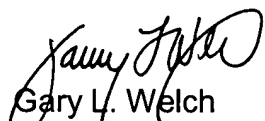
Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bechtel, Jr. '953 discloses a carding segment having clothing that is angled with respect to a tangent to the carding cylinder.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Welch whose telephone number is (571) 272-4996. The examiner can normally be reached on Mon-Fri 5:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John J. Calvert can be reached on (571) 272-4983. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Gary L. Welch
Primary Examiner
Art Unit 3765

glw